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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,988	10/31/2001	Arthur Lane Bentley		6034

7590 07/27/2005

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EXAMINER	
JORGENSEN, LELAND R	

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/003,988	BENTLEY, ARTHUR LANE	
	Examiner	Art Unit	
	Leland R. Jorgensen	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3, 15 - 23, 29, and 30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3, 15 - 23, 29, and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The following claims drafted by the examiner and considered to distinguish patentably over the art of record in this application, are presented to applicant for consideration:

Claim 21 (Suggested Amendment)

A device for producing visual displays based on the persistence of vision effect of human vision, comprising:

a lighted array of light emitting elements;

a controller to deliver display data in a columnar piecewise fashion to the lighted array;

an inertia reversal sensor to detect the completion of a first half-cycle swing of the lighted array from a first position to a second position and to detect the completion of a return half-cycle swing of the lighted array from the second position back to the first position;

wherein the controller uses only the measure of the time interval between the completion of the first half-cycle swing and the completion of the return half-cycle swing to determine the timing of lighting sequence of the light emitting elements of the array during a display half-cycle swing immediately following the return half-cycle swing so that the image displayed by the lighted array is synchronized with the movement of the lighted array.

Claim 19 (Suggested Amendment)

A device for producing visual displays based on the persistence of vision effect of human vision, comprising:

a lighted array of light emitting elements;

a controller to deliver display data in a columnar piecewise fashion to the lighted array;

wherein the lighted array is substantially fixed in position and relies on an observer to provide the kinetic motion required to produce a persistence of vision image by scanning the observer's eyes past the lighted array; and

wherein the lighted array is slanted, arched, angled, or pointed, such that the eyes of the viewer are thereby guided to scan the array in the direction pointed to by the array; so that the observer will see a persistence of vision image which is correctly oriented when the observer's eyes scanned in the direction indicated.

2. This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee.

If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing of an amendment after final rejection, whether or

not it is entered, does not stop the running of the statutory period for reply to the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

Claim Objections

3. Claims 3, 15 – 23, 29 and 30 are objected to because of the following informalities: Independent claims 15, 16, 21, and 23 each describe a device and method for producing visual displays. Each claim should describe either a device or a method, not both in the same claim. Appropriate correction is required.

Claim 17 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 17 is dependant on claim 16. Claim 16 teaches that the device has a inertia reversal sensor. Claim 17 eliminates a sensor. Thus it appears to broaden rather than narrow the prior claim.

Claim Rejections - 35 USC § 112

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. In the prior office action, examiner rejected claim 21 under 35 U.S.C. 112, first paragraph, as containing new matter. In response, applicant pointed out that this matter was discussed in paragraphs 155 – 157 of the specification. Examiner agrees and withdraws this basis of the objection.

6. In the prior office actions, examiner rejected claim 18 under 35 U.S.C. 112, first paragraph, as containing new matter. In response, applicant pointed out that the alleged new matter was discussed in paragraph 183 of the specification. Examiner agrees and withdraws this basis of the objection.

7. Claims 17 – 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 17 – 20 are dependent on claim 16. As currently amended, claim 16 describes a inertia reversal sensor. In the specification, the inertia reversal sensor is used for the embodiment of the invention using the tube device illustrated in figures 1 – 9. Claims 17 and 18, however, describe a rotating device as shown in figure 10 and claims 19 and 20 describe a fixed device. Neither embodiments as described in the specification use the inertia reversal sensor; nor would one in the art use such device for either since neither a rotating device nor a fixed device have inertia reversal. As taught in the specification and claims, an inertia reversal sensor senses an abrupt change in the direction of the moving array. Claims 17 and 18 describe a rotating array that rotates with no abrupt change of direction. The device has no need for an

inertia reversal sensor. Claims 19 and 20 describe a fixed array having no movement at all and thus no change of direction, abrupt or otherwise. Again, this device has no need for an inertia detector.

8. Claims 3, 16 – 22, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation "the double-throw inertia reversal sensor" in line 5. There is insufficient antecedent basis for this limitation in the claim. Claims 17 – 20 are rejected as dependant on rejected claims 16. Note, however, if claim 19 were rewritten as proposed above, the claim would be allowed.

Claim 17 also recites the limitation "the circumference of a circle" in line 2. There is insufficient antecedent basis for this limitation in the claim. Moreover, claim 17 teaches "while eliminating the need for a position sensor." It is unclear what a position sensor is. If it is the double-throw inertia reversal sensor, then claim 17 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. See discussion of objection above. If the position sensor is not the inertia reversal sensor, then the phrase is ambiguous.

Claim 18 recites the limitation "the upper half" and "the lower half of the circle" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 describes the display data being sent to the lighted array only as the device is swung from left to right, not during the return right to left swing. The terms left to right and right to left are vague since no direction has been established. Is the left to right swing from the

user's left to right or from an observer's left to right who may be facing the user? Amended claim 21 as presented in the first paragraph of this actions eliminates this and other rejections and objections. Claims 3, 22, and 29 are dependant on claim 21.

Claim Rejections - 35 USC § 102

9. Claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Altman, USPN 6,239,774 B1.

Claim 16

Altman teaches a kinetic device [wand 1] and method for producing visual displays that comprises a lighted array [column of lights 2] comprised of a least one light emitting element. Altman, col. 3, lines 4 – 49; and figure 1. A controller [processor 14] is coupled to the elements of the lighted array [column of lights 13]. The controller is programmed to deliver display data in a columnar piecewise fashion to said lighted array. Altman, col. 5, lines 25 – 61; and figure 3. Altman teaches that the controller is programmed to detect adjacent inertia reversal through means of a double-throw inertia reversal sensor. Altman, col. 4, lines 7 – 59; and figures 2A & 2B.

10. Claim 23 is rejected under 35 U.S.C. 102(e) as being anticipated by Solomon, UPSN 6,404,409 B1.

Claim 23

Solomon teaches a handheld kinetic device [wand] and method for producing visual displays comprising a lighted array of light emitting elements [arrays of Leeds 12, 14].

Solomon, col. 1, lines 7 – 9; col. 3, lines 36 – 50; and figure 1. The light emitting elements are mounted such that the light emitted is directed in a 360 degree doughnut shaped light pattern surrounding the device. Solomon, col. 3, lines 55 – 64; col. 8, lines 4 – 15; and figures 1 and 15. An inertia reversal sensor [direction and position switch 40] detects adjacent inertia reversals in any two opposing directions independent of how the device rotates in hand during use. Solomon, col. 3, line 65 – col. 4, line 40; col. 4, line 48 – col. 5, line 17; and figures 2 & 3. The inertia reversal sensor has contacts [conductive regions 42 and 44] at both sends of its motion. Solomon, col. 3, line 65 – col. 14, line 11; and figure 1. A controller [image computer 30] is coupled to the elements of the lighted array and to a power source [34]. Solomon, col. 3, lines 44 – 50; and figure 1. The controller is programmed to deliver display data to the lighted array, whereby visual images are displayed in the air which are visible for 360 degrees around the device when it is moved through space. Solomon, col. 3, lines 55 – 67; col. 9, lines 25 – 27; and col. 10, lines 26 – 37; and figures 1 & 23.

Claim Rejections - 35 USC § 103

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al., USPN 5,444,456, in view of Molinaroli.

Claim 15

Ohta describes a kinetic device and method for producing visual displays that comprises a lighted array comprised light emitting elements [LED array 23]; a controller [computing unit 26] coupled to the elements of the lighted array; and an inertia reversal sensor [sensor switch 24] which is able to detect reversals in the direction of inertia imposed upon it. The controller is

programmed to detect adjacent inertia reversals through means of the inertia reversal sensor and the inertia reversal sensor provides the ability to modify the function or type of display. The controller is programmed to deliver display data in a columnar piecewise fashion to said lighted array. The lighted array is comprised of at least one style of predetermined graphics shape or alphanumeric characters whereby the predetermined graphics or alphanumeric characters appear and hang in mid air when the device is moved through space. Ohta, col. 5, lines 3 – 33; and figures 9 and 11a.

Ohta does not specifically teach that the inertial reversal sensor is based on kinetic energy, thereby providing a kinetic means for device activation.

Molinaroli teaches a persistent image maker having an inertial reversal sensor [centrifugal switch 16] based on kinetically energy. Molinaroli, col. 14, lines 47 – 65; col. 24, lines 21 – 23; and figures 1 – 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the switch as taught by Molinaroli with the device and method as taught by Ohta to eliminate the need for a separate on/off mode switch. Molinaroli invites such combination by teaching,

> In the present invention, the centrifugal switch 16 serves two purposes: to wake up the microprocessor even in the absence of an on-off switch, and to control timing. There is thus no need for an on-off switch. The microprocessor 13 awakening from sleep mode acts as an on-off switch and the microprocessor algorithm controls the display timing to appear in the same location and with the same message length each time the device is moved back and forth. In user-programmable embodiments of the present device, this also permits messages to be stored in RAM because no power is removed when the microprocessor is in sleep mode. This is advantageous in that it eliminates the need for a EEPROM chip or battery-backed RAM, or other types of memory storage devices.

Molinaroli, col. 4, lines 52 – 65.

12. Claims 16, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell, USPN 4,470,044, in view of Altman.

Claim 16

Bell teaches a kinetic device and method for producing visual displays that comprises a lighted array [linear array (1)] comprised of a least one light emitting element [light producing elements (2a) – 2(h). A controller [Means(6)] is coupled to the elements of the lighted array. The controller is programmed to deliver display data in a columnar piecewise fashion to said lighted array. Bell, col. 4, lines 4 – 19; and figures 1 and 4.

Bell does not teach that the controller is programmed to detect adjacent inertia reversal through means of a double-throw inertia reversal sensor.

Altman teaches a kinetic device [wand 1] and method for producing visual displays that comprises a lighted array [column of lights 2] comprised of a least one light emitting element. Altman, col. 3, lines 4 – 49; and figure 1. A controller [processor 14] is coupled to the elements of the lighted array [column of lights 13]. The controller is programmed to deliver display data in a columnar piecewise fashion to said lighted array. Altman, col. 5, lines 25 – 61; and figure 3. Altman teaches that the controller is programmed to detect adjacent inertia reversal through means of a double-throw inertia reversal sensor. Altman, col. 4, lines 7 – 59; and figures 2A & 2B.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inertia reversal sensor as taught by Altman with the device and method as taught

by Bell to provide a less expensive, moving column of lights. Altman invites such combination with Bell by teaching,

> Bell, in U.S. Pat. No. 4,470,044 developed a technique for producing a two-dimensional image from a single column of LED's to an observer subject to saccadic eye movements. In this device, the column of LED's was stationary and blinked at a frequency specifically set to produce a two-dimensional image from the saccadic eye movements of the observer. However, the device was not designed to be used in connection with a moving column of lights and was too expensive to be used in connection with many novelty applications.

Altman, col. 1, lines 25 – 34.

Claim 17

Bell teaches that the lighted array can sweep rotationally around the circumference of a circle; the speed of rotation being variable; whereby a visual display is produced which appears stable or precedes or recedes around a central pivot point. Bell, col. 7, lines 38 – 61; and figure 6.

Claim 20

Bell teaches that the controller is programmed to deliver display data in a columnar piecewise fashion to said lighted array with the lighted array being substantially fixed in position and relying on the observer [5] to provide the kinetic motion required to produce a visual display by scanning the observer's eyes past the lighted array. Bell, col. 4, lines 4 – 19; and figures 1 and 4. The array may be integrated into other items such as games, novelty greeting devices, annunciators, and identifying markers. Bell, col. 2, lines 61 – 67.

13. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bell in view of NakaMats, USPN 6,249,998 B1.

Claim 18

Bell teaches a motor means [motor shaft (35)(36)] which moves the array. Bell, col. 7, lines 38 – 52; and figure 6.

Bell does not teach that the display being adjusted such that the text and graphics displayed in the lower half of the circle are correctly oriented, matching the orientation of graphics in the upper half of the circle; whereby a viewer is enabled to view a display in which no text or graphics are inverted.

NakaMats teaches that the display is adjusted such that the text and graphics displayed in the lower half of the circle are correctly oriented, matching the orientation of graphics in the upper half of the circle; whereby a viewer is enabled to view a display in which no text or graphics are inverted. NakaMats, col. 7, line 51 – col. 4, line 27; and figures 7 & 8.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the adjusted display as shown by NakaMats with the display device as taught by Bell so that the letters and graphics are correctly oriented.

14. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bell in view of Bednarz, USPN 4,264,845.

Claim 30

Bell does not specifically teach a mode of operation exists wherein the controller itself randomly selects programmed data for display; whereby the user is entertained by the randomness of the display.

Bednarz teaches a ornamental light display including an LED array having a controller [multiplexer M] that randomly selects programmed data for display; whereby the user is entertained by the randomness of the display. Bednarz, col. 1, lines 6 – 10, 52 – 64; and figure 1.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the random display as taught by Bednarz with the display device as taught by Bell to provide interesting and attractive ornamental displays. Bednarz invites such combination by teaching, "This invention relates to ornamental light displays and to a novel and improved method and circuit for illuminating lamps in orderly or substantially random patterns to provide interesting and attractive ornamental displays." Bednarz, col. 1, lines 6 – 10, 29 – 41. Bednarz adds,

> This invention provides a novel and improved circuit for illuminating light sources which will afford a great variety of displays and which may be readily controlled by a variety of sources of energy such as oscillators, sound waves, random noise signals and the like depending on the nature of the lighting display desired.
>
> Another object of the invention resides in the provision of a novel and improved circuit which may be utilized to control the illumination of a plurality of light sources to obtain a great variety of patterns and is relatively inexpensive and compact and utilizes relatively small quantities of power to effect control of the light sources.

Bednarz, col. 1, lines 29 – 41.

Allowable Subject Matter

15. Claims 3, 19, 21, 22, and 29 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st and 2nd paragraph, set forth in this Office action.

16. The following is a statement of reasons for the indication of allowable subject matter:

In the prior action, examiner objected to claim 19 as being dependent upon a rejected base claim, but stated that the claim would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, applicant did not amend claim 19 but amended claim 16. For the reasons stated above, claim 19 as combined with claim 16 adds new matter. Claim 16, however, if rewritten as shown in paragraph 1 above would be allowable and would not introduce new matter.

In a prior amendment, applicant had amended claim 21 to include details of operation including that the timing of the display was determined by the time interval of the prior half swing. In response to applicant's amendment, examiner stated,

> As to the second argument concerning the details of operation found in parts ((e), (f), and (g) of the claim, examiner rejects such details of operation as new matter under 35 USC 112 (1) not described in the specification, see discussion above, and under 35 USC 103(a) over Ohta in view of Molinaroli. Once the new matter issues are resolved, examiner will welcome arguments concerning the 103(a) rejection and will reexamine this ground of rejection.

In response, applicant argued that the details of operation was not new matter but was discussed in paragraphs 155 – 157 of the specification. Examiner agrees and withdraws the new matter objection. However, examiner objects to currently amended claim 21 as ambiguous under 35 U.S.C. 112. Claim 21, however, if rewritten as shown in paragraph 1 above would be allowable and would not introduce new matter because none of the prior art teaches that the timing of the display during a half swing is determined only by the time interval of the prior half swing. Claims 3, 22, and 29 are allowable as dependant on claims 21 and are acceptable as written.

Response to Arguments

17. Applicant's arguments with respect to claim 16 have been considered but are moot in view of the new ground(s) of rejection. As to claims 17 and 20, see discussion of new matter and prior art rejections above.

18. Applicant's arguments filed 13 April 2004 have been fully considered but they are not persuasive.

As to claim 15, applicant had amended claim 15 to replace "include turn on and turn off detection" with "modify the function or type of display." This appears to broaden rather than to narrow the claim and "modify the function or type of display' would include the more narrow limitation of "turn on and turn off of the display." This limitation is described in claim 15. During examination, the claims must be interpreted as broadly as their terms reasonably allow. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. The words in a claim are generally not limited in their meaning by what is shown or disclosed in the specification. It is only when the specification provides definitions for terms appearing in the claims that the specification can be used in interpreting claim language. MPEP 2111.01

As to claim 18, see display characters 17 in NakaMats, figures 7 and 8. The display characters 17 in both the upper and lower half of the circle are shown correctly oriented.

As to claim 30, applicant argues that the Bednarz reference is from a very distinguishable field of endeavor from Bell. In response to applicant's argument that Bednarz is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was

concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both Bell and Bednarz are in the field of ornamental light displays. Although both Bell and the applicant use the persistence of vision effect to create novel displays, one in the art would be familiar with techniques utilized by all such novelty light displays.

As to claim 23, Solomon teaches that the direction and position switch has two contacts at both ends of its motion. As for the addition of the term "double throw," the specification neither defines nor even uses the term and it appears that the term would apply to the switch described by Solomon. Moreover, in view of Solomon's invitation in col. 4, lines 17 – 40, it would be obvious to combine any switch available at the time of the invention and such double throw switch has been available at least since 1974. See e.g. Bergey, USPN 3,823,550.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leland R. Jorgensen whose telephone number is 571-272-7768. The examiner can normally be reached on Monday through Friday, 10:00 am through 6:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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KENT CHANG
PRIMARY EXAMINER